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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/365,510	08/02/1999	KENJI SUZUKI	35.C13719	1896

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EXAMINER

MAYES, MELVIN C

ART UNIT

PAPER NUMBER

1734

DATE MAILED: 06/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

MFE-17

**Office Action Summary**

Application No.

09/365,510

Applicant(s)

SUZUKI ET AL.

Examiner

Melvin C. Mayes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Continued Prosecution Application***

(1)

The request filed on March 25, 2002 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/365,510 is acceptable and a CPA has been established. An action on the CPA follows.

***Claim Rejections - 35 USC § 102***

(2)

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

(3)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

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claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

(4)

Claim 6 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Matsufuji 4,521,785.

Matsufuji disclose an image forming device comprising: ink jet recording heads 112Y, 112M, 112C and 112B; a conveying roller pair 127; and a pressure roller pair 128 equipped internally with a heater 129 (col. 5, lines 12-65).

By providing a conveying roller pair and a pressure roller pair equipped with heater, as disclosed by Matsufuji, an apparatus comprising a laminate section (the conveying roller pair) capable of laminating a thermoplastic laminating film onto a recording medium and a heating and pressurizing means (the pressure roller pair) capable of smoothing and bonding a thermoplastic laminating film is obviously provided, as the present specification sets forth that the laminating film and recording medium are overlapped at conveying rollers and the laminating film smoothed and bonded by a pressurizing roller containing a heater.

Claims directed to apparatus and must be distinguished from the prior art in terms of structure rather than function. *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art

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apparatus" if the prior art apparatus teaches all the structural limitations of the claims. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. App. & Inter. 1987).

(5)

Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as obvious over Nakazawa et al. in view of Sneed, Yamamoto et al. and Idei et al.

Nakazawa et al. disclose a method and apparatus for laminating comprising: providing a printer having an ink jet recording means; forming an image on a sheet by the ink jet recording means; providing a laminating apparatus connected to the printer and having pressure rollers 40a, 40b having internal laminate heaters 44a, 44b; and feeding the printed sheet between the pressure rollers together with heat-reactive and pre-heated laminate films to laminate the films to the sheet by heating and pressurizing (col. 4, line 16 - col. 5, line 25, col. 20, lines 46-59). Nakazawa et al. do not disclose that the sheet for printing by the ink jet recording means has an image-receiving layer containing particles of diameter of 0.1 to 10 microns.

Sneed teaches that the in producing recording media used in ink jet printers, polymer binder is used in combination with fillers to form the coating composition on the support to provide the desired matte surface and opaque appearance. Sneed teaches that the fillers which provide a substantial means of ink absorption due to their porous nature should have a particle size of at least 0.1 microns and a maximum of 25 microns to produce the desired matte surface (col. 2, lines 32-36, col. 7, lines 24-57).

Yamamoto et al. teach that ink jet recording medium having a porous material good in absorption lack gloss, whereby the image may be inferior in sharpness. To cope with this

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problem, it has been practiced to give gloss to the print by lamination treatment with a film after an image has been formed on the recording medium (col. 1, lines 38-55).

Idei et al. teach that surface smoothness can be imparted by heating and passing a sheet through a pressure roll nip (col. 6, lines 47-52).

It would have been obvious to one of ordinary skill in the art to have provided the sheet to be printed by the ink jet recording means in the method of Nakazawa et al. as a sheet having a coating containing particle fillers having particle size in the range of 0.1-25 microns, as taught by Sneed to produce the ink absorptive, matte and opaque surface of recording media for ink jet printing. Providing the sheet with a coating containing particles fillers of particle size in the range of 0.1-25 microns would have been obvious to one of ordinary skill in the art to provide an ink absorptive surface for ink jet printing, as taught by Sneed.

It would have been obvious to one of ordinary skill in the art to have provided the heated pressure rollers with smooth surface to maintain or provide the laminate films with a smooth surface, as Nakazawa et al. disclose that the laminate films are heat reactive and heated for bonding to the printed sheet and as Yamamoto et al. teach that laminating treatment of a film to an imaged ink jet recorded medium is used to give gloss to the imaged ink jet recording medium which lacks gloss due to its porous material. Providing the heated pressure rollers with a smooth surface would have been obvious to one of ordinary skill in the art as the laminate films are heat reactive (i.e. thermoplastic) and to maintain or provide the laminate films with gloss, as taught by Yamamoto to provide the imaged sheet with gloss, the pressure rollers must smooth the surface of the laminate films which are heated to the point of being heat reactive and as Idea et al. teach that surface smoothness can be imparted by pressure rolls.

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Providing the heat reactive laminate films with a glass transition point or film-forming temperature lower than that of a binder polymer in the image receiving coating layer of the sheet would have been obvious to one of ordinary skill in the art to prevent deformation of the image recorded in the receiving layer during heat and pressure lamination of the heat reactive laminate films to the ink jet recorded sheet.

(6)

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 1 above, and further in view of Ogawa et al.

Ogawa et al. teach that an ink jet recording sheet is provided with a 75° gloss of most preferably at least 80% (col. 4, lines 16-19).

It would have been obvious to one of ordinary skill in the art to have modified the method of the references as combined by using the laminate films to provide the ink jet recorded sheet with a gloss of at least 80% at 75°, thus providing gloss greater than 10% at 20° or 70% at 75° as claimed, as taught by Ogawa et al. as the gloss provided to an ink jet recording sheet. Providing the pressure rollers with such surface glossiness would have been obvious to one of ordinary skill in the art to maintain or provide the laminate films with such gloss and thus provide the ink jet printed sheet with such gloss.

(7)

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 1 above, and further in view of Shirota et al.

Shirota et al. teach that a transparent laminate member for treating the image surface formed on paper by ink jet recording to impart gloss, etc to the recorded image can be a single layer of thermoplastic resin or a multilayer (col. 12, lines 51-62, col. 13, lines 22-34).

It would have been obvious to one of ordinary skill in the art to have modified the method of the references as combined by providing the thermoplastic laminate films as a multilayer as taught by Shirota et al. as an alternative to a single layer for providing a transparent laminate member for treating the image surface formed on paper by ink jet recording to impart gloss. The use of a laminate film as a single layer or multilayer, as taught by Shirota et al., would have been obvious to one of ordinary skill in the art.

### *Conclusion*

(8)

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kobayashi et al. teach controlling surface roughness of a heating roller to control gloss.

(9)


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvin C. Mayes whose telephone number is 703-308-1977. The examiner can normally be reached on Mon-Fri 7:30 AM - 4:00 PM.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 703-308-3853. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

  
Melvin C. Mayes  
Primary Examiner  
Art Unit 1734

MCM  
June 14, 2002